

Work Order ID 137531

Monday, October 05, 2015 11:54:33 AM

Item ID: D6101-015
Revision ID:
Item Name: Saddle Billet
Start Date: 10/5/2015 Start Qty: 10.00
Required Date: 10/5/2015 Req'd Qty: 10.00
Reference:

Approvals: Process Plan: _____ Date: _____
QC: _____ Date: _____

Sequence ID/ Work Center ID	Operation Description
120	QC6- Inspect dimensions to drawing

120

QC

Quality Control

Memo

Ensure Material certifi

130	Identify as per dwg & Stock Locatic
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130

Packaging

Packaging

Memo

LOCATION: MAT045

140	QC21- Final Inspection - Work Orde
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140

QC

Quality Control

Memo

Work Order ID 137531-15 split

Monday, October 05, 2015 11:54:33 AM

137531

Page 1

Item ID: D6101-015
Revision ID:
Item Name: Saddle Billet
Start Date: 10/5/2015 Start Qty: 10.00
Required Date: 10/5/2015 Req'd Qty: 10.00
Reference:

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Cust Item ID:

Customer:

Approvals: Process Plan: MCS Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D6101	B

100		0.00
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100

Purchasing

Purchasing

PURCHASING

Memo

Issue P/O:

30035

a)Description: Alluminum billet

b) 9.450" x 6.250" x 2.50" thick (+0.030 / -0.000)

c) Tolerance on all dimensions are +0.030/-0.000"

d) Grain direction along 9.450" length

e) Material: 7075-T7351 (QQ-A-250/12)

f)Material certification required

110	Receive & Inspect for Damage & Mat'l Certs	0.00
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110

Packaging

Packaging

Memo

Ensure material certification is attached

CZ OCT 06 2015 10

9.
10x 8015-10-27



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO00035

Purchase Order Date 10/6/2015

PO Print Date 10/6/2015

Page Number 1 of 2

Order From :
METAUX CASTLE
P.O. BOX 4090 STN A
TORONTO, ONTARIO M5W OE9
CANADA

VU-MET002

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

Ship To Contact

Ship To Phone

Ship Via:

Yours ppd

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

USD

FOB

Destination-Collect

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
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1	D6101-015P ✓	ALUM BILLET	10/21/2015 Yes 10/21/2015		10.00 Each ✓	\$69.60	\$696.00
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AS PER DWG D6101 REV. B
B137531
size: 9.450" X 6.250" X 2.50" thick
Tolerance on all dimensions are +0.030"/-0.000"
Grain direction along 9.450" length
Material: 7075-T7351 (QQ-A-250/12)

SEP 15-10-29

Line Total: \$696.00

2	D6101-017P	ALUM BILLET	10/21/2015 Yes 10/21/2015		12.00 Each	\$64.75	\$777.00
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1
10/23
58

AS PER DWG D6101 REV. B
B137532
SIZE: 6.350" X 6.250" X 2.250" THICK
GRAIN DIRECTION ALONG 6.350" LENGHT
MATERIAL: 7075-T7351 QQ-A-250/12
TOLERANCE AS PER QUOTE +.030"/-0.000"

Note:

10/6/2015

**Castle Metals®**

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 1 of 2

Shipment No:2768571

Ship From: A. M. Castle & Co. (Canada) Inc. TORONTO - CASTLE METALS 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7		Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		Ship To: DART AEROS,HAWKESBURY,O N,CAN 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN		Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA			
Date Shipped 26-OCT-2015		F.O.B. ORIGIN		Freight Terms Prepaid		Carrier MANITOULIN		BOL No 2768571-2	

Shipment Details	Final Destination Branch - TOR
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Order No 4088781	Line No 1	Item No 752241MO	Description 2.5000.PL.7075.T7351.ALUMINUM.USH. 6.25" X 9.45" CUT RECTANGLE TO 6.25 IN () X 9.45 IN () SPECIFICATIONS: AMS-QQ-A-250/12 ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #S Email P/s and certs to: clavoie@dartaero.com				
Purchase Order No 30035		Part Number YOUR ITEM NUMBER: D6101-015		Ordered Qty 10.00 PCS		Invoice Qty 10.00 PCS	
Details		ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #S Email P/s and certs to: clavoie@dartaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS					
Delivery No. 120223565	Mill	Heat Number 	Mech Id	PCS 10	Width (IN)	Length (IN)	Shipped Qty(LBS) 152.7121

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to US law prohibited.
Date Printed: 26-OCT-2015 04:55:36 PM



Castle Metals®

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 2 of 2

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Reviewed by Authorized Castle Metals Representative:

Date:

Name:

OCT 26 2015



CERTIFIED INSPECTION REPORT

Alcoa Inc.

DAVENPORT WORKS 4879 State Street Bettendorf, IA 52722

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet.

This test report shall not be reproduced except in full, without the written approval of the Quality Department. No alteration, addition or other change is authorized to be made to this certificate. The recording of false, fictitious, or otherwise fraudulent statements or entries on this certificate by any recipient may be punished as a felony under applicable law.

Per:

Rob Woodall

Rob Woodall
Director of Manufacturing Davenport Works

Terrence Thom

Terrence Thom
Quality Assurance Manager

Page 1 of 2

Ship From: RIVERDALE, IA.

2775557	0			
Ship Date	B.L. No.	Invoice No.	Alcoa No.	Item
2015-09-24	10301399	00000	1000751115-10	DP-51115-01-10
P.O. No./Govt Contract No.	Customer		Alcoa Item	
078790 Ln#: 10			G041015S20R26	

DAS
14
9-89

15/11/03

Ship To:

Item Description

2.5 IN TR (+.075 -.075) X 48.5 IN W (+.3125 -.3125) X 144.5 IN LN (+.5 -.0) CAT D 164168 (N) A/T 7075-
T7351 RECTANGLE MILL FINISH, US1 3MM DEAD ZONE REQ'D BOTH SIDES,
SAMED. AMS-QQ-A-250/12 REV A AMS-STD-
2154 REV A EXC MRK AMS4078 REV J EXC MRK
ASTMB209 REV 14 ASTMB594 REV 13 BSS7055
REV B EXC MRK MMS159 REV T PS21211 REV M
((MARKED)) KRAFT PAPER INTERLEAVED
MAX GROSS SKID WGT: 4500 LB QUAN TOL +/-
20 % US1 CL A 3 MM CQR D164168 REV 38 CUST REQ 15-09-
22 *** W/E 15-09-26 ***

Num	Package Ticket	Lot	Weight	Quantity	UOM	Pc Id/Scr1	Inspector Clock Numbers
1	763063	383791	1706	1	PC		47218

Notes for CQR: D164168.38

PRODUCT PRODUCED TO THE REQUIREMENTS OF MIL-STD-2154 ALSO MEET THE REQUIREMENTS OF AMS-STD-2154 REV A. PRODUCT PRODUCED TO THE REQUIREMENTS OF AMS-STD-2154 REV A ALSO MEET THE REQUIREMENTS OF MIL-STD-2154. PRODUCT PRODUCED AND MARKED TO THE REQUIREMENTS OF AMS-QQ-A-250/12 ALSO MEETS THE REQUIREMENTS OF QQ-A-250/12F. PRODUCT PRODUCED AND MARKED TO THE REQUIREMENTS OF QQ-A-250/12F ALSO MEETS THE REQUIREMENTS OF AMS-QQ-A-250/12F. THIS MATERIAL HAS BEEN ULTRASONICALLY INSPECTED FULLY IMMERSION - TYPE I.

CQR: D164168.38 -Specification Limits

Temp	Dir	UTS	TYS	ELAD
		KSI	KSI	PCT
T7351	Long Transv.	Max	63.9	
		Min	52.0	6
T7351	Elec. Cond. (EC) % MIN		38.0	PCT

CERTIFIED INSPECTION REPORT

Alcoa Inc.

DAVENPORT WORKS 4879 State Street Bettendorf, IA 52722

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet.

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Rob Woodall

Rob Woodall
Director of Manufacturing Davenport Works

Terrence Thom

Terrence Thom
Quality Assurance Manager

2775557 0
Ship Date B.L. No. Invoice No. Alcoa No. Item
2015-09-24 10301395 00000 1000751115-10 DP-51115-01-10
P.O. No./Govt Contract No. Customer Alcoa Item
078790 Ln#: 10 G041015520R26

DAS
14
9-89

15/11/03

Page 2 of 2

CQR: D164168.38 -Specification Limits (cont.)

Chemical Composition	SI	FE	CU	MN	MG	CR	ZN	TI	Other Each	Other Total
Alloy 7075	Max	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05
Lot: 383791	Min		1.2		2.1	0.18	5.1			0.15

- Mechanical, Physical, Metallography, Quantometer Results

Temp	Dir	No->	UTS	TYS	EL4D
T735P	Long Transv.	Test	KSI	KSI	PCT
		3	69.6	58.8	10.4
			69.7	58.9	10.3
			69.3	58.5	10

T735P Elect Cond %IACS 41.4 41.5 41.5 PCT

Cast Number	Chemical - OES	SI	FE	CU	MN	MG	CR	ZN	TI
H9027064	Actuals	0.07	0.27	1.6	0.02	2.5	0.19	5.6	0.02

This material was melted in the United States or a Qualifying Country [REF DFARS 225.872.1(a)]; it was manufactured in the United States

MATERIAL RECEIPT INSPECTION FORM

MATERIAL D610/-015
DATE 15/11/03

PO / BATCH NO 30035/137531

MATERIAL CERT REC'D yes
QUANTITY RECEIVED 9
QUANTITY INSPECTED 9
QUANTITY REJECTED _____

THICKNESS ORDERED 9.45X6.25X2.50
THICKNESS RECEIVED 9.45X6.25X2.50
SHEET SIZE ORDERED _____
SHEET SIZE RECEIVED _____

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	(N)	
CORRECT FINISH	(Y)	N	
CORROSION	Y	(N)	
CORRECT GRAIN DIRECTION	(Y)	N	
CORRECT MATERIAL	(Y)	N	
CORRECT THICKNESS	(Y)	N	
PHOTO REQUIRED	Y	(N)	
CORRECT MATERIAL	(Y)	N	
CORRECT REF # TO LINK CERT	(Y)	N	
CORRECT MATERIAL IDENTIFICATION	(Y)	N	
CORRECT M# ON THE MATERIAL	(Y)	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	(N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	(N)	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK RECORD RESULTS BELOW				
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

Testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY <u>DAS</u>	SIGNED OFF BY _____		
DATE <u>15/11/03</u>	DATE _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

MATERIAL RECEIPT INSPECTION FORM

INSTRUCTIONS FOR INSPECTING BAR, TUBING, ROUND, & SHEET STOCK

1. VERIFY STOCK TO DART PURCHASE ORDER
2. MEASURE ALL DIMENSIONS FOR EACH PURCHASED STOCK
 - a. WIDTH, THICKNESS, DIAMETER, WALL THICKNESS & LENGTH
3. VERIFY CONDITION OF MATERIAL (e.g. DAMAGED, CORRODED, etc)
4. VERIFY THAT SUPPLIER HAS A NUMBER (HEAT #) ON ITS RECEIVING REPORT TO LINK TO MATERIAL CERTS
5. VERIFY MATERIAL CERTS ARE CORRECT TO THE DART PO INSTRUCTIONS
6. REMOVE / CUT A PIECE OF MATERIAL FOR SAMPLE HARDNESS TESTING

INSTRUCTIONS FOR INSPECTING SKIDTUBE & STEP EXTRUSION

1. VERIFY TO DART SUPPLIED DRAWING
 2. SAMPLE INSPECT MATERIAL IN BUNDLE TO ENSURE MATERIAL CAN BE RECEIVED INTO DART
 3. USING PORTABLE HARDNESS TESTER VERIFY HARDNESS OF THE MATERIAL TO THE DRAWING
 4. VERIFY THAT MATERIAL CERTS MATCH TO WHAT'S CALLED UP ON THE DART DRAWING
- AFTER MATERIAL PASSES INSPECTION**
5. HAVE DART EMPLOYEES START STOCKING MATERIAL BUT REQUEST MIN 20pcs FOR FULL INSPECTION
 6. INSPECT ALL DIMS AS PER DRAWING REQUIREMENTS

INSTRUCTIONS FOR INSPECTING CROSS TUBE MATERIAL

1. VERIFY MATERIAL CERTS MATCH THE REQUIREMENTS ON THE DART DRAWINGS
2. INSPECT MIN. HALF THE BATCH OF EXTRUSION RECEIVED INTO DART
3. INSPECT MATERIAL AS PER THE EXTRUSION REPORT
 - a. WALL THICKNESS USING ULTRA SONIC IN 4 LOCATIONS
 - b. OUTSIDE DIAMETER HIGHEST/LOWEST BOTH ENDS
 - c. INSIDE DIAMETER HIGHEST/LOWEST BOTH ENDS
 - d. STRAIGHTNESS @ CENTER OVER 12' SPAN
 - e. WALL THICKNESS USING TUBE MICROMETER HIGHEST/LOWEST BOTH ENDS
4. IDENTIFY EACH TUBE IN SEQUENCE OF INSPECTING (TUBE 1, TUBE 2,) AND W/O# AND PO#
5. RECORD ALL FINDINGS ON EXTRUSION REPORT

IF ANY QUESTIONS PLEASE SEE QC COORDINATOR BEFORE GOING FURTHER